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- 193 -



Fig. 4.13 231,980 Case B Case A 200 180,730 Water Demand (10[°]cu.m/day) 150 129,480 Max. Daily Demand 100 Average Daily Demand 50 41,740 24,740 23,740 Stage 1 Project Available Water Supply 0 1990 1995 2010 2005 2015 2000 Year THE STUDY FOR CONSTRUCTION OF DAM IN MALEWA RIVER SYSTEM GREATER NAKURU WATER SUPPLY PROJECT THE REPUBLIC OF KENYA TITLE **Development Sequence** MINISTRY OF WATER DEVELOPMENT EASTERN DIVISION NATIONAL WATER CONSERVATION AND PIPELINE CORPORATION of Raw Water Transmission System JAPAN INTERNATIONAL COOPERATION AGENCY

Fig. 4.14



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192,025 Case B Case A 153,800 Max. Daily Demand 109,025 Average Daily Demand 42,215 26,505 24,215 Stage 1 Project 8,505 Available Water Supply 1990 1995 2000 2010 2015 2005 Year

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200

150

100

50

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25,215

Water Demand (10³cu.m/day)

Fig. 4.15 (1/2)

THE REPUBLIC OF KENYATHE STUDY FOR CONSTRUCTION OF DAM
IN MALEWA RIVER SYSTEM
GREATER NAKURU WATER SUPPLY PROJECT
EASTERN DIVISIONTITLE
Development Sequence of Nakuru
Treated Water Transmission System
Treatment Works-GilgilNATIONAL WATER CONSERVATION
AND PIPELINE CORPORATIONJAPAN INTERNATIONAL COOPERATION AGENCYTitle
Development Sequence of Nakuru
Treatment Works-Gilgil

Fig. 4.15 (2/2) 200 167,840 Case A Case B Water Demand (10³cu.m/day) 150 129,615 Max. Daily Demand 100 91,390 2 Average Daily Demand 50 35,360 22,050 19,650 Stage 1 Project 6,350 Available Water Supply 0 1990 1995 2000 2005 2010 2015 Year THE STUDY FOR CONSTRUCTION OF DAM IN MALEWA RIVER SYSTEM GREATER NAKURU WATER SUPPLY PROJECT TITLE THE REPUBLIC OF KENYA Development Sequence of Nakuru MINISTRY OF WATER DEVELOPMENT EASTERN DIVISION Treated Water Transmission System NATIONAL WATER CONSERVATION AND PIPEUNE CORPORATION JAPAN INTERNATIONAL COOPERATION AGENCY Gilgil-R6 reservoir

- 198 -

^{Fig.} 4.16



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- 199 -

Fig. 4.17



2000

1500

UNIT PIPELINE COSTS US\$

Pipe Diameter (mm)

Note: Working Pressure 20kg/sq.cm FRP = Glass Fiber Reinforced Pipe DCIP = Ductile Cast Iron Pipe

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	THE REPUBLIC OF KENYA MINISTRY OF WATER DEVELOPMENT	THE STUDY FOR CONSTRUCTION OF DAM IN MALEWA RIVER SYSTEM GREATER NAKURU WATER SUPPLY PROJECT EASTERN DIVISION	Selection of Pipe Materials
	AND PIPELINE CORPORATION	JAPAN INTERNATIONAL COOPERATION AGENCY	

		Fig. 4.18
		·
R. (East) R. (East) R. Vary M'day 1 19.000 2-1 102.500 2-2 51.250	275 2-3 51,250 275 2-3 51,250 Ray latter Ray latter Renyatta Barrack T/W Renyatta Barrack T/W Stage m /day 1 870 2-1 830 2-1 830 2-1 830 2-1 830 2-1 830 2-2 600 2-3 50,000 2-1 3,340 1 0 2-1 3,340 1 0 2-1 3,340 2-3 50,000 2-1 3,360 4,950 2-3 390 2-3 990 2-3 990 2-3 990	
Gilgil Stage m /day	1 5,485 2-3 2-3 2-3 2-3 2-1 11,210 2-3 6,010 2-3 6,010 2-3 4,010 2-3 6,010 6,020 2-3 2-3 6,010 5 6,020 2-3 6,010 2-3 4,94 2 1 3,700 2-3 4,94 5 2-1 3,700 2-3 4,94 0 Eburn R. 2-3 4,94 5 2-1 1,110 2-3 4,94 0 2-3 1,110 2-3 4,94 0 2-3 1,110 2-3 4,94 0 2-3 1,110 2-3 4,94 0 2-3 1,110 2-3 4,94 0 2-3 1,110 2-3 4,94 0 2-3 1,110 2-3 4,94 0 2-3 1,110 2-3 4,94 0 2-3 1,110 2-3 4,94 0 2-3 1,110 2-3 4,94 0 2-3 1,110 2-3 4,94 0 2-3 1,110 2-3 4,94 <	
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THE REPUBLIC OF KENYA MINISTRY OF WATER DEVELOPMENT NATIONAL WATER CONSERVATION	THE STUDY FOR CONSTRUCTION OF DAM IN MALEWA RIVER SYSTEM GREATER MAKURU WATER SUPPLY PROJECT FASTERN DIVISION Water Water	m of Allotment

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Fig. 5.3 MB - 3 (EL. 2,153.33) E.<u>I 2,1</u>60^m Lu 0 5 10 15 20 WIN 2,150 2.2 LSd₂ 2.140 NWU₂ 3.5 Wtf2 2,130 1.7 3,6 NWI2 2,120 3.7 Lsda 4.6 Tufi 2,100 Nwu₃ 6.5 2,110 Wtf3 2,090 NWIS Tuf₂ 2,080 2,070 2,060 LEGEND 20 <u></u> Lu \odot \leq Lu < 20 (2) 10 \leq Lu < 10 3 5 5 > Lu THE STUDY FOR CONSTRUCTION OF DAM TITLE IN MALEWA RIVER SYSTEM Geological Profile along GREATER DAKUNU WATER SUPPLY PROJECT ERSTERN DIVISION Malewa Dam JAPAN INTERNATIONAL COOPERATION AGENCY

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Fig. 5.16 ۲ 48 Reservoir Water Level 40 Outflow⁻ EL. 2,152.91 36 Max. Water Level Max. Outflow = 1,564 m3/sec 30. 24. 3 Time (hour) Qmax. = 1,753 m3/sec Probable Maximum Flood 18. <u>N</u> -o EL. 2157.0 2155.0 2153.0 2151.0 -2142-D 400. 2000 1600. 1200. 800. Ö Discharge (m3/sec) ۲ THE STUDY FOR CONSTRUCTION OF DAM IN MALEWA RIVER SYSTEM GREATER NAKURU WATER SUPPLY PROJECT EASTERN DIVISION TITLE THE REPUBLIC OF KENYA MINISTRY OF WATER DEVELOPMENT Flood Routing Study of Spillway NATIONAL WATER CONSERVATION AND PIPELINE CORPORATION JAPAN INTERNATIONAL COOPERATION AGENCY

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Fig. 6.1 EL. (m) Storage - Capacity Curve 2,110 2,109 2,108 2,107 2,106 2,105 2,104 2103.2 Intake Water Level 2,103 Formation height of Intake bed 2,102 2,101 2,100 2,099 2,098 Approx. 3 35,000 m³ 2,097 2,096 0 50,000 100,000 150,000 200.000 250,000 Storage Capacity (m³) THE STUDY FOR CONSTRUCTION OF DAM TITLE THE REPUBLIC OF KENYA IN MALEWA RIVER SYSTEM GREATER NAKURU WATER SUPPLY PROJECT EASTERN DIVISION MINISTRY OF WATER DEVELOPMENT Storage Capacity of Turasha Dam NATIONAL WATER CONSERVATION AND PIPELINE CORPORATION JAPAN INTERNATIONAL COOPERATION AGENCY

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THE STUDY FOR CONSTRUCTION OF DAIN THE REPUBLIC OF KENYA MINISTRY OF WATER DEVELOPMENT EASTERN DIVISION

NATIONAL WATER CONSERVATION AND PIPELINE CORPORATION

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THE REPUBLIC OF KENYA	THE STUDY FOR CONSTRUCTION OF DAM IN MALEWA RIVER SYSTEM	TITLE
MINISTRY OF WATER DEVELOPMENT	GREATER NAKURU WATER SUPPLY PROJECT	Construction Schedule of
NATIONAL WATER CONSERVATION	EASTEAN DIVISION	Water Supply Facilities
AND PIPELINE CORPORATION	JAPAN INTERNATIONAL COOPERATION AGENCY	

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Fig. 7.3

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